

IDEA-0622-67
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29 September 1967

MEMORANDUM FOR: Deputy for Materiel, OSA

SUBJECT: Nomex Outer Coveralls for IDEALIST Pilots

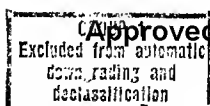
25X1A REFERENCES: (1) [] (IN 90816) dtd 28 July 1967
(2) Memo For The Record, 6 June 1967
(OXC-0716-67)

1. There have been at least two ejection experiences in the recent past that demonstrate the requirement for clothing which will protect pilots from fire or flames. Reference 2 summarized the experience of an SR-71 crew member who ejected through a fireball of flaming fuel and survived. His survival was attributed primarily to the fact that the outer cover of his pressure suit was fabricated of a special heat/flame resistant nylon called NOMEX HT. Reference 1 contains information referring to a recent SAC U-2 accident in which the hot gas from the automatic lap belt initiator burned through the pilot's nylon coverall and outer layer of the pressure suit during the ejection sequence. The burning fortunately stopped short of the torso bladder and pressure suit function was therefore not affected. However, had the torso bladder been damaged with the pilot at altitudes in excess of 50,000 feet, serious or fatal injury would have occurred. The ejection of [] at Detachment G also resulted in clothing burns from the lap belt initiator gas. In this instance the flight was at low altitude and no vital functions were affected by this burning.

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2. Cockpit flash fires during flight or ground operations are survivable if the pilot has protective clothing such as NOMEX coveralls. While no clothing would allow the pilot to remain in such an environment, NOMEX clothing would provide him with sufficient protection to allow him to accomplish ejection or emergency ground egress. This would also be true in the event of a crash landing that resulted in fire in or around the cockpit. Heat resistant clothing would extend the

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survival time of the pilot and allow him time to make a successful egress or be rescued by ground personnel.

25X1A 3. Because of the valid requirement for heat/flame resistant clothing, the undersigned requested the David Clark Co. to provide a cost estimate for partial pressure suit outer coveralls made of NOMEX HT. The difference in cost from the present nylon coverall is due to the higher material costs (NOMEX HT costs approximately \$12.00/yard). The unit cost for NOMEX coveralls for each presently assigned pilot is approximately \$280.00. Approximately [] coveralls are required to outfit all presently assigned IDEALIST pilots, giving a total cost of []. An additional \$1,500 is estimated as the cost to provide NOMEX fabric covers for the partial pressure suit helmets (exact costs for this item have not been determined yet). Purchase requests for coveralls and helmet fabric covers would be issued under David Clark Co. Contract CT-700 to which \$24,000 was allocated for FY-68. Finally, the production list of equipment to outfit any new IDEALIST pilots [] should be changed so that each new pilot will only receive NOMEX coveralls. 25X1A

25X1A 4. A message is being prepared for D/M/OSA release, requesting [] to issue purchase requests to satisfy the requirement outlined in the above paragraphs. 25X1A

[]
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